

Amendment to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An RNA aptamer which binds to the coagulation pathway factor IXa, the RNA aptamer comprising a secondary structure ~~comprising wherein the secondary structure consists essentially of, in a 5' to 3' direction,~~ a first stem region, a first loop region, a second stem region, a second loop region, and a third loop region, wherein the first loop region comprises a consensus sequence comprising NNAUA, wherein N is selected from the group consisting of A, U, G, and C.
- 2-3 (Canceled)
4. (Previously presented) The aptamer of claim 1, having a dissociation constant of about 20 nanomolar (nM) or less.
5. (Previously presented) The aptamer of claim 4, wherein the dissociation constant ranges from about 400 pM to about 10 nM.
6. (Currently Amended) The aptamer of claim 4, wherein the dissociation constant ranges from about 100 ~~pM~~ pM to about 10 nM.
- 7-11. (Canceled)
12. (Previously presented) The aptamer of claim 1, which comprises at least one modified nucleotide.
13. (Currently Amended) An RNA aptamer comprising a nucleotide sequence selected from ~~the group consisting of SEQ ID NO: 70 and SEQ ID NO: 3[[.]]~~ or a truncate thereof.
14. (Canceled)
15. (Currently Amended) The aptamer of claim 13, wherein the nucleotide sequence is ~~SEQ ID NO: 3 or SEQ ID NO: 70.~~
16. (Canceled)
17. (Currently Amended) The aptamer of claim 13, wherein the sequence is ~~SEQ ID NO: 3 or a truncate thereof.~~

18. (Canceled)
19. (Canceled)
20. (Currently Amended) A pharmaceutical composition comprising a therapeutically effective amount of an RNA aptamer which binds to the coagulation pathway factor IXa, in a pharmaceutically acceptable diluent or vehicle, the RNA aptamer comprising a secondary structure comprising wherein the secondary structure consists essentially of, in a 5' to 3' direction, a first stem region, a first loop region, a second stem region, a second loop region, and a third loop region, wherein the first loop region comprises consensus sequence comprising NNAUA, wherein N is selected from the group consisting of A,U,G, and C.
21. -72 (Canceled)
73. (Previously presented) The aptamer of claim 12, wherein the aptamer comprises at least one 2'-modified nucleotide.
74. (Previously presented) The aptamer of claim 12, wherein the aptamer comprises at least one 2'-halo-modified nucleotide.
75. (Previously presented) The aptamer of claim 12, wherein the aptamer comprises at least one 2'-fluoro-modified nucleotide.
76. (Previously presented) The aptamer of claim 12, wherein the aptamer comprises at least one 2'-O-alkyl-modified nucleotide.
77. (Previously presented) The aptamer of claim 12, wherein the aptamer comprises at least one 2'-methoxy-modified nucleotide.
78. (Previously presented) The aptamer of claim 12 wherein at least one cytidine is 2'-deoxy-2'-fluorocytidine.
79. (Previously presented) The aptamer of claim 12 wherein at least one uridine is 2'-deoxy-2'-fluorouridine.
80. (Previously presented) The aptamer of claim 12 wherein all uridines are 2'-deoxy-2'-fluorouridine.
81. (Previously presented) The aptamer of claim 1, that comprises a 3' chain terminator.
82. (Previously presented) The aptamer of claim 1, that comprises about 15 to 100 bases
83. (Previously presented) The aptamer of claim 1, that has less than about 100 bases.

84. (Previously presented) The aptamer of claim 1, that has less than about 40 bases.
85. (Previously presented) The aptamer of claim 1, that comprises a covalently linked carrier.
86. (Previously presented) The aptamer of claim 85 wherein the carrier is a soluble polymer.
87. (Previously presented) The aptamer of claim 85 wherein the carrier is a biodegradable polymer.
88. (Previously presented) The aptamer of claim 85 wherein the carrier is polyethylene glycol.
89. (Previously presented) The aptamer of claim 1 additionally comprising covalently linked cholesterol.
90. (Canceled)
91. (Previously Presented) The aptamer of claim 1, wherein the first stem region comprises at least about 5 nucleotides at a 5' end of the aptamer that form base pairs with at least about 5 nucleotides at a 3' end of the aptamer.
- 92-117 (Canceled)
118. (Canceled)
119. (Previously presented) The pharmaceutical composition of claim 20 wherein the composition is in a unit dose.
120. -153 (Canceled)
154. (Previously presented) The pharmaceutical composition of claim 20, wherein the first stem region comprises at least about 5 nucleotides at a 5' end of the aptamer that form base pairs with at least about 5 nucleotides at a 3' end of the aptamer.
155. (Canceled)
156. (Currently Amended) An RNA aptamer comprising a nucleotide sequence at least 80% homologous to a nucleotide sequence selected from ~~the group consisting of SEQ ID NO:70 and SEQ ID NO:3[[,]]~~ or a truncate thereof.
157. (Previously presented) The aptamer of claim 156, wherein the aptamer comprises at least one modified nucleotide.

158. (Previously presented) The aptamer of claim 156, wherein the aptamer comprises at least one 2'-modified nucleotide.
159. (Previously presented) The aptamer of claim 156, wherein the aptamer comprises at least one 2'-halo-modified nucleotide.
160. (Previously presented) The aptamer of claim 156, wherein the aptamer comprises at least one 2'-fluoro-modified nucleotide.
161. (Previously presented) The aptamer of claim 156, wherein the aptamer comprises at least one 2'-O-alkyl-modified nucleotide.
162. (Previously presented) The aptamer of claim 156, wherein the aptamer comprises at least one 2'-methoxy-modified nucleotide.
163. (Previously presented) The aptamer of claim 156, wherein at least one cytidine is 2'-deoxy-2'-fluorocytidine.
164. (Previously presented) The aptamer of claim 156, wherein at least one uridine is 2'-deoxy-2'-fluorouridine.
165. (Previously presented) The aptamer of claim 156, wherein all uridines are 2'-deoxy-2'-fluorouridine.
166. (Previously presented) The aptamer of claim 156, that comprises a 3' chain terminator.
167. (Previously presented) The aptamer of claim 156, that comprises about 15 to 100 bases
168. (Previously presented) The aptamer of claim 156, that has less than about 100 bases.
169. (Previously presented) The aptamer of claim 156, that has less than about 40 bases.
170. (Previously presented) The aptamer of claim 156, that comprises a covalently linked carrier.
171. (Previously presented) The aptamer of claim 170, wherein the carrier is a soluble polymer.
172. (Previously presented) The aptamer of claim 170, wherein the carrier is a biodegradable polymer.
173. (Previously presented) The aptamer of claim 170, wherein the carrier is polyethylene glycol.

174. (Previously presented) The aptamer of claim 156, additionally comprising covalently linked cholesterol.
175. (Previously presented) The aptamer of claim 156, that comprises a 3' chain terminator.
176. (Previously presented) The aptamer of claim 156, that comprises about 15 to 100 bases
177. (Previously presented) The aptamer of claim 156, that has less than about 100 bases.
178. (Previously presented) The aptamer of claim 156, that has less than about 40 bases.
179. (Currently Amended) The aptamer of claim 156, wherein the aptamer includes a first stem region that comprises at least about 5 nucleotides at a 5' end of the aptamer that form base pairs with at least about 5 nucleotides at a 3' end of the aptamer.
180. (Currently Amended) A pharmaceutical composition comprising a therapeutically effective amount of an RNA aptamer which binds to the coagulation pathway factor IXa, the aptamer comprising a nucleotide sequence at least 80% homologous to a nucleotide sequence selected from ~~the group consisting of SEQ ID NO:70 and SEQ ID NO:3[[.]]~~ or a truncate thereof.
181. (Previously presented) The pharmaceutical composition of claim 180, wherein the composition is in a unit dose.